



City of Tacoma

Questions and Answers

Battery Electric Locomotive Project EYC RFP Specification No. TR24-0146F

All interested parties had the opportunity to submit questions in writing by email to Sara Bird, Senior Buyer by January 24, 2025. The answers to the questions received are provided below and posted to the City's website at www.TacomaPurchasing.org. Navigate to [Current Contracting Opportunities / Supplies Solicitations](#), and then click *Questions and Answers* for this Specification. This information IS NOT considered an addendum. Respondents should consider this information when submitting their proposals.

- 1. There are conflicting requirements in the technical specifications related to the top speed of the locomotive. Is the requested top speed 40 MPH or 50 MPH?**

Answer: 50 mph

- 2. Can Tacoma Rail provide the desired energy capacity for the battery system? Battery capacity will be the leading cost driver for the project, and without a baseline requirement for capacity, it will be difficult to compare proposals.**

Answer: 1.8 MWh – 2.4 MWh

- 3. The specification requires AC traction motors to be installed in standard EMD-style Blomberg trucks. At this point, the supplier is not aware of a service-proven solution that meets this expectation. Will Tacoma Rail permit the use of service-proven and industry-standard D77/78 DC traction motors?**

Answer: It is Tacoma Rail's preference to have AC traction motors.

- 4. Can Tacoma Rail provide a desired path to compliance regarding locomotive crashworthiness? Will compliance with crashworthiness requirements through exemptions or exclusions be permitted for used frames, or is it desired to have designs that meet the newly built locomotive standards?**

Answer: Please submit a proposal outlining your capabilities. If you offer multiple options, please provide proposals for each. The final deliverable must comply with all applicable federal requirements.

- 5. The specification requests that the locomotive be designed with a fire suppression system. Can Tacoma Rail provide its vision for this system? The supplier is not currently aware of a fire suppression solution that will provide substantial mitigation should the onboard batteries enter thermal runaway. Thermal runaway protection will be provided by several layers of detection and control system responses. Fire suppression could be provided for systems other than the energy storage system to prevent other thermal events from migrating to the storage system.**



Questions and Answers

Answer: Respondents shall provide a narrative on how the locomotive battery compartment complies with the following codes/standards for fire protection safety features:

- Thermal runaway management systems to prevent thermal runaway.
- UL9540 listing for cell, module, or unit level as available.
- Full scale fire-testing data (UL9540A or similar) for the expected fire size if thermal runaway occurred.
- General compliance approach to NFPA 855.
- Describe how the battery compartment for the individual battery modules will be vented from explosive gases. i.e., vented up, vented on sides and complies with either NFPA 68 or NFPA 69.

6. **The City of Tacoma has two active RFPs, one of which includes requirements for Buy America compliance and another which does not require Buy America compliance. Is Tacoma Rail's expectation that all systems and components between both the Buy America-compliant and non-Buy America compliant locomotives be compatible with one another (that is parts interchangeability and operational compatibility between locomotives procured under separate procurements with separate requirements)? Also, is Tacoma Rail aware of or has Tacoma Rail identified a preferred vendor for an energy storage solution that is compliant with Buy America requirements?**

Answer: Tacoma Rail has issued two RFPs to maintain separate grant funding. These RFPs have been drafted in accordance with applicable grant requirements. Tacoma Rail expects all systems and components across the three locomotives to be fully compatible.

7. **Regarding the battery charging infrastructure, is there any limitation to simultaneously using up to three individual chargers to meet the 750 KW required capacity?**

Answer: Tacoma Rail will look at all proposals submitted that are considered responsive.

8. **Please provide an additional two-week period for follow up questions following the release of Tacoma's responses to the first round of questions.**

Answer: The submittal deadlines were previously extended to March 18, 2025.

9. **In reference to Section 1: Background:**

- a. **Please specify the type of compliance or certification required for the locomotives and battery charger(s)?**

Answer: This is a Request for Proposal (RFP), not a request for bid. The provided information is intended for manufacturers to conduct research.

- b. **Please provide reference numbers or details of the FRA compliance standards that may be applicable to these battery locomotives.**



City of Tacoma

Questions and Answers

Answer: This is a Request for Proposal (RFP), not a request for bid. The provided information is intended for manufacturers to conduct research.

- 10. Payment and Performance Bond is listed to be included in both the *submittal package* and *after award*. Would the City please confirm the Bonds are only a requirement to be submitted after award and amend the SUBMITTAL CHECK LIST?**

Answer: A Payment and Performance Bond will only be required after award.

In reference to: Battery-electric locomotive that will be charged using a reverse pantograph style charging system:

- 11. To be able to use a charger for different makes of battery locomotives, the loco builders will need to have advanced information of the charger system that will be used. The locomotive charger input system, battery chemistry and energy management system will have to be designed / customized to suit the charger type that is chosen by Tacoma Rail. Please share the technical details of the reverse pantograph charging system that Tacoma Rail has selected or is planning to use?**

Answer: Tacoma Rail is not able to provide technical details for the reverse pantograph charging system.

- 12. In-principle it will still be possible to customize the battery locomotive to meet the charger specification even after the award of contract. However, it can possibly affect both the bid price and locomotive delivery schedule for the battery locomotive.**
- a. Please confirm that if Tacoma Rail is not able to provide charger specifications before the bid's closing date, then the bidder is allowed to submit bid with their own proposed model of charger?**

Answer: Tacoma Rail will look at all proposals submitted that are considered responsive. Please submit a proposal outlining your capabilities. If you offer multiple options, please provide proposals for each.

- b. Please confirm that after bid submission if Tacoma Rail selects a charger of their own choice, then the bidder of this RFP be given an opportunity to evaluate the chosen reverse pantograph system to be implemented at Tacoma Rail and possibly adjust their Bid if there are changes that may affect technical specifications and ultimately the costs for the locomotive?**

Answer: A selection advisory group will review submitted proposals and recommend an award based on the evaluations. There will not be an opportunity for changes to a submission bid(s) after the submission deadline.



City of Tacoma

Questions and Answers

- 13. This RFP does not specifically call out a Build America Buy America (BABA) certification requirement. Please confirm that BABA is not mandatory requirement for this RFP?**

Answer: Given there is no federal funding associated with this RFP, Tacoma Rail is not aware of a BABA requirement under the grant agreement for this specification.

- 14. The requirements in RFP TR24-0001F and TR24-0146F are almost the same. As possible bidder, we are separately submitting question for clarification for TR24-0001F. Please confirm that the answers received for questions posed for TR24-0001F will also be applicable to the Minimum Requirements and Technical Specifications for this RFP TR24-0146F.**

Answer: Questions will be answered separately for each RFP.

- 15. The specifications do not list what type of batteries are preferred. Are you looking at both Thin Plate Pure Lead (TPPL) systems and Lithium-Ion or is there no preference?**

Answer: We are looking at Lithium.